when he stated that it had been there about thirty years, but had never felt any pain in it, or near it, and did not think it had any connection whatever with the pain; but on my stating my firm belief that the small tumour was the sole cause of the acute suffering, he agreed to my proposal of removing it immediately, which I proceeded to do. I thought the small tumour was a firm encysted one, but soon found out my mistake, for, on attempting to transfix it, my small bistoury was stopped. I then laid open the skin over the tumour, and grasped it firmly in a common dressing forceps, but found I could not dislodge it from its adhesions without the aid of a small scoop. This small tumour was in reality a small piece of phosphate of lime, which I transmitted to Professor Syme, along with the details of the case.

I have further to add that the Tic was completely cured by the removal of the tumour, and has not again returned, even in the most modified degree, to the very great satisfaction of the patient. In many cases, I am of opinion that tic is produced by the presence of a tumour, of one kind or other, on the nerve, though situated so deep as to elude detection. I may here add, that the patient has suffered, every week almost during the past thirty years, from severe headaches, but since the removal of the little tumour he has had no return of headache whatever.—*Edinburgh Med. Journ.*, April, 1856.

15. *Gunshot Wounds.*—Dr. G. H. B. Macleod, in some "Notes on the Surgery of the War" (*Edinburgh Medical Journal*, May, 1856), makes the following interesting remarks on gunshot wounds:—

"Of the 'peculiarities' of gunshot wounds, none strikes one earlier than the results which flow from the fact, that their being essentially of a contused character, their tract must suppurate before it closes. Superficial wounds through muscles, sometimes, though rarely, form exceptions, as they have been seen to adhere by the first intention. Thus I have seen one case, in which a superficial wound of the belly of the gastrocnemius by a ball, was said to have healed by the fifth day. The separation of the sloughs from the tract of a ball have, in the case I have had under my charge, taken place at different periods between the sixth and twenty-seventh days, according to the depths of the parts traversed. This separation gives rise to another feature in these wounds, the occurrence of secondary hemorrhage, as well as the fact, that if the orifices of the tract become clean and adhere while suppuration is going on within, most troublesome accumulations of pus and burrowing abscesses will result. The greater contusion at the orifice of entrance causes it, in general, though by no means universally, to be longer of taking on the adhesive process than the orifice of exit.

"The eccentric course often pursued by balls, has frequently been remarked upon in former wars, and though we have had many most striking instances of this peculiarity, still I suspect we have had less of it than occurred in the experience of former campaigns. The Minie ball is seldom content to dally with a limb, or run round a cavity. Its force, on the contrary, suffices not only to carry it through any of the great cavities, but has been seen to lodge in the body of a third man, after perforating that of his two front rank comrades. The old ball is still sometimes used, and most curious is its occasional wandering. Thus I have known it enter above the elbow, and be cut out from the posterior wall of the axilla of the opposite side, while in another instance it entered the right hip, and was found embedded in the left popliteal space. This circumstance often makes the search for balls exceedingly difficult, more particularly as the feelings of the patient frequently give one but little assistance. That such a search should be instituted at the very earliest possible moment before inflammation and swelling have come on, is a most imperative maxim; and unless greater injury be inflicted by its removal than is likely to follow its retention, the necessity of extracting the ball and all foreign matters it may have introduced along with it, is of the utmost importance, both immediately and remotely. Two instances may be mentioned as illustrating the necessity for an early and careful search—though such an obvious point hardly requires elucidation. One case occurred to myself. A soldier, wounded on the 18th of June, was brought under my care in the General Hospital in camp. He had sustained a compound fracture of the right arm, which was much swollen on admission. I was told, and accepted the story, that the accident had been caused by a piece of shell, to which species of injury the wound bore every resemblance, and that a surgeon who had seen him in one of the trenches, had removed it. At the earnest solicitation of the patient, I contented myself with applying the necessary apparatus to try and save the limb, without minutely examining the wound. The injury turned out to be much masked and to be more severe than was at first supposed—the shaft of the humerus having been split into the capsule—and when removing the limb at the shoulder, some days after, a large grape-shot dropped out from among the muscles. I once saw a piece of shell weighing nearly three pounds, extracted from the hip of a man at Scutari, after the battle of the Alma, which had been overlooked for a couple of months, and to which a very small sinus alone led. This latter case, too, illustrates another curious circumstance in gunshot wounds, viz., the way in which the elasticity of the soft parts often permits bodies to pass in behind, which they close, so as to make it a matter of wonder how such masses could have got admission.

"The sensation caused by a ball striking a limb appears to be of the most trivial and transient nature, and is commonly likened to a smart blow from a cane. If a cavity be entered, the collapse and mental trepidation are often, however, very appalling.

"Shell wounds are more destructive to the soft textures than those caused by rifle balls, being frequently followed by wide-spread sloughing; but the hard parts often suffer less. The bone may be fractured, but it is frequently not much comminuted. The shell falling vertically, gives rise sometimes to most wonderful escapes.

"The constitutional fever which follows gunshot wounds is, in general, proportioned to the importance of the part implicated, though most curious exceptions to this not unfrequently arise. That old soldiers, if sober, are much less affected by this constitutional disturbance than others, is, I think, very observable. The mitigation of this, and of the local inflammation, the prevention of all accumulations of matter, by the making of judicious dependent openings, the relaxation of several muscular fibres, the application of light unirritating dressings, rest, and attention to the general principles of surgery, comprise all the treatment which gunshot wounds usually demand. In the profuse suppurations which so often follow these injuries, the use of cod-liver oil has been markedly advantageous. The extreme simplicity of the appliances and dressing employed during this war, and the nearly total absence of poultices and such like 'cover sluts,' would, I think, merit the approbation of even Mr. Guthrie. The era when the 'Oleum catellorum' and the tenting of wounds was in vogue, has entirely passed away forever; and, though wondrous virtues are ascribed to water, it is not on account of any 'magical or unchristian' power which it is supposed to possess. Water dressing and the lightest possible bandaging is in universal repute in this army, though not seemingly so popular with our allies the French, with whom grease, divers coloured washes, heavy pledgets of charpie and much cloth, still hold their place. There is, however, one application to profusely suppurating wounds, which I have seen the French employ with more manifest advantage than many of the astringents we use, viz., a solution composed of the perchloride of iron in the proportion of one to three of water.

"Splints, too, of the simplest pattern are now employed, and the straight position universally preferred in the treatment of fractures. Bandaging is reduced to the fulfilment of the most necessary essentials, and all complications studiously avoided. Endless rollers, multiplied splints, and various contrivances are still too often seen in the French ambulances. Stiff bandages have been but little used by us, though one felt much tempted to apply them after their recorded success in the Schleswic-Holstein war. The 'appareil amovo-inamovible' is said to be popular with our enemies, and an illustrated book on its employment, published in 1851, for the use of the army, was found by a friend who was with me in the hospital library of Fort Kinburn.

"The long believed and much feared effects of the wind of balls, has so completely passed away into the mythology of surgery, that if it were not that one of my own wards, at this moment, contains two most excellent instances proving its utter nonsense, I would not at all refer to it. The haversack of one man was struck by a round shot on the 8th September, and though his back was slightly discolored, he was not knocked down; and the other suffered a trivial abrasion of the thigh by a like cause. I had lately two under my notice—a sergeant who was struck on the chin by a 9 lb. ball, and though it fractured his jaw severely, in no way affected his brain; and another soldier had a piece of flesh, about the size of the fist, cleanly nipped out of his hip in the same way."

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16. *Hemorrhage following Gunshot Wounds.* By G. H. B. Macleod.—Hemorrhage following gunshot wounds is not now so dreaded as it used to be, because it is known to be by no means so frequent in occurrence as it was formerly believed to be. I have heard surgeons declare that tourniquets might have been left at home, so far as any use they were of at the battles of the Alma and Inkerman, but I suspect, though cases did not often require them when seen by the medical man, that hemorrhage is in reality the chief immediate cause of death in the case of the majority of men killed in the field. It would be a dangerous experiment to make, but withal a very interesting one, to go over a field of battle immediately after a fight, and record the apparent causes of death in each case.

The returns fail to inform us of the numbers of cases in which secondary hemorrhage succeeded gunshot wounds in the course of this war, and though I have no figures to which I might refer in corroboration of the statement, I am inclined to think that the proportion is higher than that set down by Mr. Guthrie. The period of its occurrence has appeared to range, on an average, between the fifth and the twenty-fifth day, without drawing any minute distinction, as is done by Dr. John Thomson, between hemorrhage due to sloughing, ulceration, or simply excited arterial action at different stages of the process of cure. The fifteenth day has, curiously enough, been that on which it has taken place in the vast majority of the cases of which I have retained notes. One instance, the particulars of which I failed to learn, was said to have occurred as late as the seventh week, when the wound—a gunshot wound of the thigh—was nearly cicatrized. Hemorrhage occurring early has been almost universally treated on the principle laid down by Bell, and so well supported and elucidated by Guthrie, of tying both ends of the wounded vessel; but when the limb is much swollen, the parts infiltrated matted together and disorganized, it is all very well to say the same principles must be carried out notwithstanding the additional risk that the coats of the vessel may be diseased, but any one who has tried it a few times will know that to do so is no easy task. With a vessel like the posterior tibial, which has repeatedly bled and infiltrated the tissues of a large muscular calf, changing their appearance and matting them together, and with a large irregular wound, into which the blood from the vessel does not seem to be poured in a collected form, but to well out from a large sloughing surface, so as to afford no guide to its exact position, the undertaking is one of the most difficult that can be imagined. The rules and precepts laid down in books about passing probes from the surface towards the seat of the bleeding, the appearance assumed by the vessel, and the dissecting-room directions to find it, are all utterly useless in actual practice; and the knowledge of them is often more a hindrance than an assistance. Watchful eyes and careful cutting, are the only reliable guides.

I believe that pressure so carefully applied over a long tract of the main vessel above, as will diminish, without arresting, the stream passing through it, will, in many cases, be sufficient to allow such coagulation to take place in the open mouths of the vessels as will prevent any future annoyance—that is always supposing a very large extent of an artery be not ripped open, as it were, and as I have seen it, by a rifle ball. The French do not, seemingly, act so unreservedly on the principle of putting a ligature on both ends of a bleeding vessel, as we do. They perform Anel's operation in not a few cases. The interesting and instructive nature of the following case is evident: A Russian boy,